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Editorial Comment

Another New Development

The order of the day along the tuberculosis front is to find the case before the advent of symptoms. This means looking for the disease in those who are apparently healthy or apparently free from signs or symptoms of tuberculosis. The slogan of the N. T. A's. early diagnosis campaign this year, embodies such an idea. We have indeed come a long way from those battle cries of yesterday—"Beware of that cough which hangs on" or "Those symptoms may be due to tuberculosis, etc." They were all well and good—and still are in many instances; but a new era is dawning and a new chapter is being penned by the scribe of progress.

Tuberculosis is being sought for, and found, not only in its very early stages and before symptoms appear; but even within a few weeks after the seeds of infection enter the body. The amazing potentialities for treatment, prevention and control toward which this builds can readily be realized. Paramount in this achievement are the x-ray examination and the tuberculin test. The one denotes the earliest presence of demonstrable lesions in the lung; the other, the existence within the body of the tubercle bacilli. The present utilization of these two important procedures has come about by the rapid improvement in the science of roentgenology and the purification and standardization of tuberculin.

The largest yields of unsuspected tuberculosis have been obtained by case-finding surveys in contacts, young adults, in industrial groups and in that large indigent group which is made up of the underprivileged, the unwashed and the unemployed.

Recently, in an exceptionally fine survey reported by Plunkett and Mikol, and published in the March issue of the *American Review of Tuberculosis*, another fruitful source of finding unsuspected tuberculosis was opened up; another medium for tuberculosis case-finding which has not in the past been sufficiently explored, was revealed. This survey dealt with case-finding in the general hospitals. It was estimated from this study, that in 1937 about 40,000 cases of unrecognized tuberculosis were admitted to the general hospitals. The survey was carried out by making an x-ray examination of the chest of all patients over fifteen years of age admitted to the hospital. Exceptions were made for those patients too ill to undergo the examination; also, known and suspected cases of pulmonary tuberculosis were excluded in the statistical reckoning.

The final result of this study was that 0.6

per cent of the adult admissions to the general hospitals had unsuspected and clinically significant tuberculosis. In the general hospitals, wherein the survey was conducted, it was disclosed that an average of only 15 per cent of the patients were routinely given x-ray examinations of the lungs.

The general hospital does afford a group from the general population under ideal conditions for carrying out case-finding in tuberculosis. Let's hope that this stimulating work by Plunkett and Mikol will open wide another important avenue in the approach toward tuberculosis control. C. H. H.

Case-Finding in Florida Tuberculosis agencies in Florida are fortunate in having progressive leadership. Doctor A. J. Logie, Director of the Division of Tuberculosis of the Florida Board of Health, is utilizing the Rapid Paper Film Method of case-finding. He states that the groups now being concentrated upon are the indigent contact cases, indigent suspected cases, families of those on relief, families of those unemployed, unemployables and transients. The negro and the adult population are particularly sought after. Preliminary tuberculin testing is done only on children under sixteen years, who fall into the above groups.

Last year the total cost per case of tuberculosis discovered which required attention, was only $107.20. The total cost per film was $1.93.

Doctor Matthew Jay Flipse of Miami, Florida, the Governor for Florida of the American College of Chest Physicians and Chairman of the Tuberculosis Committee of the Florida Medical Association, has actively cooperated in furthering the case-finding work. A united effort in this work has been made by the Florida Medical Asociation, the Florida Radiological Society, the Florida State Education Authorities, and the Florida Tuberculosis and Health Asociation.

Each individual included in the program must fill out a request slip, which must be signed by a local physician or by the county health officer.

Mrs. May Pynchon, the able Executive Secretary of the Florida Tuberculosis and Health Association, is to accredited for her most energetic assistance to the County Health Units, including financial help. The Tuberculosis Association pays the clinician, supplies x-rays, supplements the transportation of nurses or otherwise contributes to the case finding program as is deemed most necessary by the doctors in authority. In several counties, Seal Sale Money has been used for the purchase of x-ray equipment.

The Florida program among industrial groups is in its embryonic state and is done sporadically, although a number of industrial surveys are being made by local health agencies in various cities.

An organization which for $107.20 each finds its tuberculous cases requiring treatment, can be relied upon to have the kind of efficiency which will increase its work with industrial groups. Some of the schemes for case-finding cost about $4,000.00 to find each positive sputum case and about $2,000.00 to find each case requiring attention. F. W. B.

That Gallup Poll Again Dr. George Gallup sums up his poll on cancer, which was released through the press on April 7th, as follows: "Despite encouraging gains in public enlightenment on these questions since a previous institute survey 12 month ago, the current study shows that wide-spread misconceptions still exist and that much work still remains to be done in educating the public."

The following question, with its resultant answers, concerns the tuberculosis problem most. "In your opinion, which of the following diseases is the most serious public health problem—Tuberculosis, cancer, infantile paralysis, or syphilis?

Syphilis	46%
Cancer	29%
Tuberculosis	16%
Infantile paralysis	9%

In analyzing the above figures, one may draw various conclusions. As is shown, nearly 50 per cent of our people think syphilis is our most serious health problem. Why do they think this? Is it because it has been stressed as a major problem by our U. S. public health service, or is it because syphilis strikes home more readily, being a social disease contracted

in its own particular way? Certainly this survey shows public opinion is in error when we consider the fact that recent U. S. public health statistics show the death rate in syphilis as only 9 per hundred thousand, against a tuberculosis death rate of 48.9 per hundred thousand. We also know that from a contagious standpoint, syphilis is not as menacing as tuberculosis. The error is carried still further. The poll shows that only 29 per cent contend that cancer is the most serious health problem, while the death rate from cancer is 114.6 per hundred thousand.

There can be but one reason for these erroneous opinions of the general public, and that is inadequate education.

While we as physicians are interested in the control of all diseases; as fellows of the American College of Chest Physicians, we are most interested in the tuberculosis control problem. We, therefore, should turn our thoughts toward ways and means of improving the education of the public. Progress has been made, to be sure, as is evidenced by the reduction in the death rate. But the death rate is still alarmingly high. In fact, tuberculosis still produces the highest death rate in the productive age groups.

We invite your attention to an editorial by Dr. Frank Burge, in the March issue of this Journal, in which he pointed out that "Educating farmers never eliminated tuberculosis from bovine herds. The veterinarian had to go into the herd, find the tuberculous animals, and separate the infected from the healthy. Then, and only then, did we see significant elimination of bovine infection."

Since millions have been spent on "education of the public" with questionable results, why should we not now take a large portion of the money and spend it on case finding. The veterinarian has proved to us the value of this method. The conducting of surveys of industrial workers, white collar employees, schools and colleges will go much further, not only in finding cases, but from an educational standpoint, than the methods now used.

There is no doubt that tuberculous patients and their immediate families are receiving major benefits from education concerning tuberculosis. This intensive type of education is necessarily under the direct supervision of the physician, and it takes root because the patient and his family are directly concerned. But with the general public, it is a different story. Therefore, in our opinion, tuberculosis funds would be better spent, if they were used for continuous surveys of all groups, picking-up and segregating cases when found, and continuing the education of these patients and their families. C. M. H.

An Invitation The vast majority of the readers of this Journal are general practioners of medicine; it is largely, if not essentially, intended for them. It may also be presumed, and correctly so, that these readers are, in the main, more than casually interested in diseases of the chest, for otherwise they would not be reading these words. Some few, of course, open the pages with something of an enquiring curiosity. It may be parenthetically stated that such curiosity often becomes the knocker upon the portals of knowledge. "Be wise and enter therein."

Predicated, therefore, upon your interest as general practitioners in diseases of the chest, an urgent invitation is extended to you to attend the meeeting of the American College of Chest Physicians to be held at the Biltmore Hotel in New York City, June 8th-10th. See elsewhere in this issue the program and other details. After this meeting, you will be on hand to attend the American Medical Association's meeting; which immediately follows; and perhaps to take in a bit of the New York night life. So begin now to shape your plans to attend this big "double header" of medicine. Come play, come fraternize—come learn about the chest from the masters.

C. H. H.

The Biltmore Hotel in New York The editor made a trip to New York several weeks ago to select space for "open house" at the Annual Convention of the American College of Chest Physicians. He was delighted with the facilities the Biltmore Hotel has to offer, both for hotel accommodations and convention needs.

It is hoped that our Fellows will make their reservations for hotel accommodations sufficiently early, so that we will not lose the reserved space for them. F. W. B.

Management of Pulmonary Tuberculosis in Relation to Hemorrhage*

PAUL H. RINGER, M.D., F.A.C.P.
Asheville, North Carolina

I GLEAN from the program that I am required to present in ten minutes the management of hemorrhage in cases of pulmonary tuberculosis. It follows that I must be dogmatic and brief. Hemorrhage is a frequent occurrence, varying in degree from 1 or 2 cc. loss of blood to massive blood loss, resulting in exsanguination within a few minutes. This latter is, fortunately, quite rare, and has become more and more infrequent since the institution of strict bed-rest regimen.

The management of hemorrhage in pulmonary tuberculosis can be described under three headings:

1. Psychic Measures
2. Medicinal Measures
3. Surgical Measures

1. *Psychic Measures:* These are most important, since the patient is always scared. Fear increases the heart rate, raises the blood-pressure, and makes for more abundant bleeding. A call to a bleeding patient should be answered *at once* unless it is known that someone is present who can authoritatively take charge. Most patients are more afraid of blood than they are of death itself, and the psychic insult of a hemorrhage of 50 to 100 cc. (harmless insofar as loss of blood is concerned) is often striking beyond measure. Equanimity, so eloquently written of by Sir William Osler, is absolutely essential. The vast majority of hemorrhages are relatively small—under 250 cc.—and will at the moment do the patient no harm, though one must always bear in mind the possibility of a bronchogenic spread of disease. A calm and equable attitude is essential. The occurrence should not be made light of in a jocose way, but encouragement and the instilling of a feeling that this is not a terrible bolt from the blue should be stressed. The mere presence of the physician with his reassuring smile and hand-clasp will quiet the racing heart and reduce the heightened arterial pressure. As a matter of fact, many bleedings have been known to cease with the coming of the doctor.

2. *Medicinal Measures:* So many drugs have been given for the treatment of hemoptysis, that to go over them in any detail would necessitate a monograph rather than a ten-minute paper. The writer, after over thirty years of experience with pulmonary hemorrhage, has developed (perhaps unfortunately) a very fatalistic attitude toward this accident. He looks upon hemoptysis as essentially self-limiting, as far as the acute manifestations are concerned; and does not believe that drug therapy, other than sedatives and blood coagulants, is of any great value. For continued, moderate bleeding, surgical methods, which will be discussed later, may be most efficacious.

The first medicinal procedure instituted in the presence of any pulmonary bleeding should be for the purpose of quieting the nervous system. In free bleeding of 120 cc. or more, it is advisable to lessen the cough reflex so that coughing is not violent. Many patients are told to lie flat on their backs and not to move a muscle (and they adhere to this instruction implicitly). This is a mistake. The patient should be in that position which gives him the most relaxation, causes him to cough the least, and to raise the blood with the greatest ease. Any position which will do this is the correct one. I have had patients sitting upright, lying on the right or left side, on the back, partially propped up—it makes no difference. Relaxation and comfort are the great objectives. Some sedative is usually necessary at once. The barbiturates take too long to act, though as a follow-up measure they are valuable. Some opium derivative is needed—codeine (gr. ½ hypodermically) does well in many cases, but more often one small dose of morphine, pantopon or dilaudid is necessary, because it is imperative to cause the patient to relax. In my experience, morphine

* Read as part of a symposium at a meeting of the Southern Tuberculosis Conference in Charleston, S. C., Oct. 3-6, 1939.

and its first cousins, in proper dosage, have not given rise to post-hemorrhagic pneumonias, as has been stressed by many in the past. By "proper dosage," I mean an amount that will not "knock the patient out," but will merely lessen tension to such a degree that the suggestive therapy carried out by the physician and the competent nurse can come into its own. Sedation is of the utmost importance at first. In a hemorrhage of any consequence I usually give one of the blood coagulants, either fibrogen or thromboplastin (though there are others just as good) in full dosage over a period of 24 to 36 hours. If they do not work at the end of that time, I abandon them, since they may develop an anti-coagulating effect, if persisted in. An ice-bag over the heart and the chewing of cracked ice help psychically.

Atropine in large doses (gr. 1/33 to gr. 1/25), hypodermically, was at one time greatly in vogue, on the valid theory that the drug caused dilatation of the superficial vessels and, therefore, moved large quantities of blood from the deeper blood-beds to the subcutaneous areas and thus lowered deep blood-pressure, which, in turn, served to check pulmonary bleeding. I used atropine quite routinely for a long while. The effects on the patient were disagreeable, because of the great dryness of the mouth, pupillary reactions, occasional vesical paralysis, etc. I do not think that it helps much. Ergot had its period of short-lived triumph; but it, too, turned out to be a bird of passage, as did calcium chloride administered intravenously. As the years went by, becoming more and more imbued with the idea of self-limitation of pulmonary hemorrhage, I naturally developed less and less confidence in any particular medicinal measure and felt that in prolonged bleeding the last drug used was given credit for stopping the hemorrhage, when, as a matter of fact, the hemorrhage was about to stop of itself. So I return to my original postulates of equanimity, sedation and nursing care.

The rare fulminating hemoptyses cannot be treated. When blood comes pouring from a miliary aneurysm in a large artery spanning a cavity, there is nothing to be done, for the unfortunate patient usually is dead within a quarter of an hour.

3. *Surgical Measures:* We have at our disposal two surgical measures for arresting protracted hemorrhage or for quieting one large bleeding, which we fear may recur. These measures are: Phrenic crushing and artificial pneumothorax.

I mention phrenic crushing first because I believe it to be the soundest physiological procedure. Its only disadvantage is that, if the patient is to be in his own home, or in a nursing cottage not equipped with a surgeon, removal to a hospital is imperative. The physiological appeal rests on the ground that diaphragmatic paralysis provides relaxation for lung tissue and that alone. Artificial pneumothorax, on the other hand, though providing relaxation of lung tissue in some areas, may also bring about tension of lung tissue in other areas because of the presence of pleural adhesions; and may thus, if the tension be exerted in or about the area of hemorrhage, tend rather to increase than to diminish bleeding. It is best to reiterate a truism, that one must be definitely informed as to the side whence the bleeding is coming before doing a phrenic operation. This can often be determined by the physical signs; more often by the x-ray; and at times, by the sensations of the patient, which I find most trustworthy in a corroborative sense, but upon which I would never solely depend.

If undecided as to the location of bleeding, a pneumothorax is probably the best initial surgical effort, because if the air injection fails completely to allay the loss of blood, it is always possible to close the pneumothorax space by aspiration and try the other side; but when phrenic crushing is done, "that is that" for from six to twelve, or even eighteen, months.

In cases where the physician contemplates either phrenic crushing or artificial pneumothorax, the condition does not usually constitute an absolute emergency; in other words, a day or so will not matter and there is time for removal to a hospital and for the making of proper observations, which will, in all but a small minority of cases, point the way to the proper procedure.

To summarize:

Pulmonary hemorrhage is:

a. Frequent

b. As a rule, relatively slight

c. Almost always self-limiting
d. Rarely fulminating and then usually at once fatal

Medical therapy rests on:

a. A calm attitude on the part of physician and attendants
b. The prompt institution of adequate sedation
c. The administration of one of the many blood coagulants
d. The exhibition of whatever drug has proven satisfactory to the particular practitioner

Surgical therapy is resorted to:

a. When the bleeding is quite violent at the outset, to-wit: 250 to 500 cc., and where a recurrence in equal intensity might markedly impair the blood volume.
b. In cases of persistent bleeding amounting to 60 to 120 cc. in 24 hours over a period of some days and in which drug therapy has not been successful.

As to surgical procedures:

a. If positive as to site of bleeding, phrenic crushing is the operation of choice for reasons already stated.
b. If doubtful as to the site of bleeding, artificial pneumothorax should be tried, as it offers the physician post-operative control which phrenic crushing does not.

213 Arcade Building

Allergy as a Cause of Frequently Recurring Colds and Coughs in Children

J. A. RUDOLPH, M.D.
Columbus, Ohio

BRONCHIAL ASTHMA, hay fever, hives, and augioneurotic edema are generally accepted as the commonest clinical forms of allergy and are usually recognized without special difficulty. This paper is not concerned with these obvious varieties, but rather with those conditions which are definitely allergic, but are not readily apparent, often being quite difficult to identify.

In 1931, I presented a paper before the Section on Diseases of Children at the Eighty-Second Annual Session of the A.M.A., entitled *Allergic and Infectious Conditions of Upper Respiratory Tract in Children—Differential Diagnosis,* in which I pointed out that some of the commonest conditions seen in children are those which are classified under the general heading of infections of the upper respiratory tract.[1,7] Among them are included rhinitis, sinusitis, nasopharyngitis, tonsillitis, laryngitis, tracheitis, and bronchitis. All of these conditions may be infectious in origin, but are frequently manifestations of respiratory allergy, from which they must be differentiated if proper treatment is to be instituted. In addition, many of the true infections are complicated by an underlying allergy and cannot be cleared up until the allergy predisposing the mucous membranes to infection is relieved. It has now become possible to solve a great many of the so-called recurrent colds and chronic coughs in children by thorough allergic supervision.

That the ingestion of foods and the inhalation of certain dusts, animal dander and plant pollen may cause frequent colds and chronic coughs in susceptible individuals is now an established fact. This is in direct contrast to similar symptoms that are caused by infection and bacteria. Regularly recurrent, frequent colds may be interpreted as perennial or seasonal hay fever; and the chronic persistent cough of this type, as a preasthmatic symptom. The variety of allergic symptoms which can involve any organ or system of the body makes it vital for every physician or pediatrician to have at least a working knowledge of allergy.

The early recognition of the allergic state

in childhood, with proper diagnosis and treatment, may prove to be the principal factor in the prevention of asthma and other major disturbances of the body. It becomes, therefore, of paramount importance for the physician to interpret and properly treat the earliest allergic manifestations. It will in this way become possible to outline the necessary preventative measures for the child's future welfare.

Diagnosis

The result of treatment in any disease depends upon correct diagnosis; this is especially true in allergy. The clinical history must be the first step taken in the diagnosis of an allergic problem and is of paramount importance.

1. A family history of allergy may be obtained by careful questioning in more than fifty per cent of the cases.[2,3] Details are especially important in obtaining an allergic history. Chronic sinus infections; nasal catarrh; migraine augioneurotic edema; or cyclic vomiting (acidosis); and the better understood allergic symptoms such as hay fever, asthma, eczema, and urticari are usually present in the family history.

2. Early allergic manifestations are frequently noted in the patient's own account of his history. It has been shown recently in a survey of 1000 children that had been followed for a period of at least five years, that of 500, "78 per cent of the infants manifested some allergic phenomenon before they were 4 months old; 22 per cent had symptoms before one month, and almost half of the group before 2 months of age; in 91 per cent symptoms were present by the first birthday; and all of the total number, by 2 years of age."[4] These manifestations were, in the order of their frequency, rash (eczema); frequent vomiting (pylorospasm); and gastro-intestinal upsets, such as severe colic, diarrhea or constipation. Less frequently, sneezing, urticaria and wheezing were present. Instinctive dislikes for certain foods, and resultant food poisoning by these foods, are important facts to learn in dealing with children, since forceful insistence on the eating of these foods can cause harm.

3. Present allergy, such as recurring head colds, characterized by "stuffy nose," worse on arising, and gradually improving, is significant of allergic rhinitis (perennial hay fever, chronic sinusitis, chronic catarrh). Chronic nocturnal cough, without demonstrable physical findings, is another not uncommon symptom.

The children presenting the symptoms of frequent colds and chronic coughs have usually visited many physicians. Experience has given me the impression that many physicians do not think of allergy in relation to these conditions, unless the symptoms are typical of hay fever or bronchial asthma, and some even consider typical asthmatic attacks to be infectious in origin because in some children they are accompanied by fever. These patients have been "run through the mill," as it were. Their tonsils and adenoids have been removed; "cold shots," have been administered; vitamins have been forced on them; light treatments, heat treatments, sinus treatments, have all been tried; and, finally, the children have been disposed of by being sent to a warmer climate, but all this to no avail because the patient often is worse than before all the treatments were begun. These facts certainly make it self-evident that we are dealing with a problem which in all probability is allergy.

Symptoms

The patient with an allergic cold is constantly troubled. He no sooner recovers from one such "cold" than he develops another one. The onset and termination of such colds are characteristic. They begin abruptly and end in the same manner, lasting from several hours to several days. The predominant disturbance is in the nose and is constantly troublesome, although somewhat less during the day. Itching of the nose is another important and characteristic sign. A child who has an allergic nasal condition will rub his nose vertically from his forehead to his lip, while in the case of a true infectious cold he will usually rub his nose from side to side.[5] Sniffling, and a hacking, scraping dry cough are present, as efforts to clear the nose and throat of the mucus secreted. This is most often present on arising. Nasal congestion and obstruction are nearly always present upon arising and after several hours may clear up completely, in some cases.

Upon retiring, one or both nostrils become congested and often remain so throughout the entire night. As a result, mouth breathing, snoring and heavy breathing result. The "adenoid facies" is noticeable in varying degrees, depending on the length of time the condition has persisted. Bowen and Balyeat[6] and Todd[7] have described malformations of the jaws and teeth from nasal allergy. Early morning sneezing is not as frequent in children as in adults. Blowing the nose, however, is quite common, and the discharge is of a thin consistency.

The constitutional symptoms in children old enough to describe them are primarily a tired feeling, or one of exhaustion; headaches of frontal or occipital type, often on one side only; biliousness, irritability, nervousness, anorexia, impaired hearing, poor work in school and an antisocial attitude are also frequent complaints. The so-called "seasonal colds" are usually hay fever and may be presented to the doctor with one symptom referrable to the nose or eyes, or in the classical picture of hay fever.

Chronic coughs, which are often called chronic bronchitis, are in many instances preasthmatic manifestations. The cough is most pronounced in the morning on arising, or it may awaken the patient from a sound sleep. It is usually a paroxysmal, hard, dry cough, resembling whooping cough. It may be a series of short, hacking coughs, lasting from one to two hours, in an effort to relieve a tickling sensation in the throat or larynx. These symptoms are frequently associated with nasal allergy and are often accentuated by excessive exercise, laughing, fatigue and changeable cold and damp weather.

Two types of nasal pathology may be observed. First, in the acute rhinitis problem, the nose presents a pale or red, shiny, swollen mucous membrane bathed in a serous discharge, the turbinates and the septal wall sufficiently edematous to obstruct the nares. Second, in the chronic type of nasal allergy, the passages often appear normal, or are usually of a livid or pale boggy mucosa seen most frequently in the region of the nasopharynx and can be observed only by postnasal examination with the nasopharyngoscope. Hypertrophic adenoids may give rise to similar symptoms, but can be ruled out by digital examination. A majority of these children have had their tonsils and adenoids removed, often more than once. The pharynx may be studded with elongated or pea-sized swollen masses of lymphoid tissue, showing a granular throat.

The geographic tongue or that having smooth, base, shiny, round or cercinate lesions with raised borders has been indicted as pathogonomonic of an allergic diathesis. This sign is not present in all allergic individuals.

Sinus pathology consisting of an allergic edema may be present. It has been pointed out by Dean that radiography is not reliable in children due to the thickness of the facial bones.[8] An examination of the nasal secretions will usually verify the diagnosis of allergy. After having taken an unusually careful past, present and family history and having made a thorough physical examination of the patient, along with the necessary laboratory tests, a thorough allergic study must now be made to discover the specific offending allergens.

Skin testing should be considered imperative in these patients, because clues found in this way are specific and can not be found as quickly in any other way. Faulty skin tests, as a result of improper technic, the use of poor materials, and an insufficient number of tests with the proper antigens will fail to obtain adequate information. Recurrence of symptoms after long free intervals may necessitate retesting the patient as new sensitivities may be acquired. Children often lose sensitiveness to old troublesome antigens and must, therefore, be checked so that the diet may be replenished, or the environment reorganized, if necessary. Food allergy is more frequent in infants and children under five years of age.[9] This sensitiveness tends to markedly diminish by the second decade and inhalant antigens assume a major role. Dust, pollens and epidermals assume a greater role than foods after the fifth year of life. Infectious allergy is not as frequent a cause of nasal and bronchial allergy in children as is commonly believed.

In conclusion, it should be emphasized that these frequently recurring colds and chronic coughs differ from the more obvious forms of nasal and bronchial allergy (i.e. seasonal

hay fever and bronchial asthma) chiefly in the difficulties they offer in identification, rather than in the problems connected with treatment. Certainly, once their allergic nature has been recognized, it becomes apparent that the therapeutic methods applied to the typical case, are equally applicable to these less typical, but none the less true allergic conditions. It should be further emphasized that the prevention of asthma and other forms of major allergy is the ultimate goal in the treatment of frequent colds and chronic coughs of proven allergic nature.

601-03 Huntington Bank Building

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The Control of Tuberculosis in Industry A Responsibility and a Profit*

C. D. SELBY, M.D.
Detroit, Michigan

PULMONARY TUBERCULOSIS is a bacterial disease. It is not peculiar to industry, and it does not arise out of occupation. Nevertheless its prevention may become industry's most important health problem. The reasons are these:

(a) *Tuberculosis Is a Terminal Infection in Silicosis.* Silicosis, a chronic incurable disease of the lungs, is an occupational disease. It does not ordinarily cause disablement until complicated by tuberculosis, the development of which it seems to favor. When disablement occurs, it is usually total and permanent. As workmen have had opportunities in the past to acquire silicosis, cases are now present in industry and their number is unknown. When tuberculosis becomes engrafted on these, they become important compensable occupational disease problems.

(b) *There Is a Tendency to Assume That Dust Aggravates Tuberculosis.* Silicosis is caused by the inhalation of silica dust. Knowledge of that fact has introduced a tendency to regard all dusts as harmful, at least as irritants to the respiratory passages and, therefore, possibly capable of aggravating tuberculosis or predisposing to its development. Whether justified or not, this tendency is fostered by doctors who testify that dust might have aggravated a pre-existing tuberculosis. Even though they do not know that to be scientifically proven, they are reluctant to say it is not possible. Therefore, if tuberculosis occurs in a workman exposed to dust, the exposure may be assumed to be casual and compensation may unjustly be allowed.

(c) *Tuberculosis Is More Prevalent Than the Occupational Diseases.* The occupational diseases are being controlled to a remarkable degree. In the various states where records are maintained they account for about 2 per cent of the total compensation costs. In our own group of about 200,000 hourly-rated employees, they caused but 466 days of lost time last year. This gives a ratio of 0.001 days per 1,000 hours of work. The total number of individuals involved was only 25, which is 1.3 per 10,000.

* Presented before the National Tuberculosis Association, Los Angeles, California, June 23, 1938. Reprinted from the *Transactions of the National Tuberculosis Association*, 1938.

Available figures indicate that something like 40 or more per 10,000 workers have active tuberculosis and about 100 per 10,000 have minimal and healed lesions. Therefore, by comparison with the occupational diseases, tuberculosis becomes quite important.

It is comparatively easy to control occupational diseases. They result from exposure to substances of known toxicity. The contacts are directly with the skin, by mouth or through the respiratory system. If workmen are protected against these contacts they do not have occupational diseases.

On the other hand, tuberculosis is a disease of bacterial origin. It results primarily from contact with those who have it and secondarily, from conditions that lower resistance to the infection. These conditions are not necessarily found in the plants. In fact they are more likely to be found outside.

Industry can act as a case-finding agency, it can protect workmen against contact with open cases within the plants, and it can safeguard workmen against conditions of employment that might accelerate minimal lesions or aggravate quiescent ones, but it cannot control outside causes even though the employee group is affected. So the over-all problem of tuberculosis control in industry is one of general community concern. It cannot be segregated within industry.

So far as industry itself is concerned, the sound long range program is to clear the plants of tuberculosis and to keep them clear. This does not necessarily imply that all workmen who have tuberculosis are unemployable. It does mean, however, that they must be employed only under conditions that permit them to work in safety to themselves and their fellow employees and they must have close medical supervision.

This does not require any fundamental changes in industrial medical procedure. Organized, as it is, to prevent occupational diseases and to maintain health, modern industrial medicine is prepared for the control of other diseases that affect or are affected by employment, and tuberculosis of course falls in this group.

With this as an introduction, industry's health maintenance program will now be discussed and wherever appropriate, special consideration will be given to its influence upon the control of tuberculosis.

Health Maintenance Program

1. The object is to give employees the best possible health protection consistent with: (a) the purpose of industry; (b) the employer's responsibilities as fixed by law, and (c) the rights of the physicians who are the employees' personal medical advisers.

The purpose of industry is manufacturing. To justify itself, medical service must assist in this purpose. It does so by holding down time lost by illness and injury to the lowest possible level, but it must do so in conformance with the employer's obligations as fixed by law and without interference with the rights of physicians in private practice. As the diseases and injuries of occupational origin account for less than one day of lost time for each employee per year, as compared with 9 days from non-occupational injuries and sickness, it is strikingly evident that the private practitioners are an important factor in employee health. They must be given the consideration that is due them.

A. Procedures for Control of Sources of Disease in the Plant

2. The doctor is the health officer of the plant. It is his duty to locate, identify and determine the importance of all occupational and environmental sources of disease or health impairment and to see that they are corrected.

For the purpose of brevity, all industrial causes of disease are termed "exposures." They may be found in working conditions or environments, processes, operations or methods, substances or materials. They are usually in the form of dusts, fumes, mists, vapors, gases, or fluids, but may be found in various circumstances and conditions in the plant.

Location and Identification of Exposures
The first step toward control is to locate the spots that might be harmful and determine the nature of the effects to be expected from them. This is important because it develops information which is useful to the doctor when he examines the workmen later on, or when they consult him.

Exposures can be located by (a) tracing back sickness that occurs, but this is an expensive and unscientific method. It is much better for the doctor to (b) study the materials used in manufacturing, and if any are recognized as possible sources of disease, the operations or processes in which they are used are immediately identified as exposures.

Doubtless, most of the conditions capable of causing sickness can be located in this way, but a harmless substance may become harmful under certain conditions of usage. It is therefore necessary that the doctor (c) study the methods of manufacture, checking against conclusions drawn from the materials and looking for additional sources of disease in (d) general plant conditions.

For the purpose of orderly procedure, the doctor should describe all exposures, locate them and specify the number of men employed in each. In other words, he takes inventory.

Methods for Determining Importance of Exposures. Having located and noted the nature of exposures, it is the duty of the doctor to determine the probability of their causing sickness. It may be possible for him to reach obvious conclusions merely by (a) cursory observations. If harmful dusts, fumes, mists, vapors and gases are noticeable, the assumption is that they are not under control.

If the doctor has any doubt, or if he desires confirmation, it is well that he arrange for (b) engineering studies, consisting of dust counts or chemical analyses of the air at the breathing level of the workmen. These will indicate the extent of exposure and may become useful as factual evidence.

Some industrial establishments employ hygiene engineers to supplement the observations of the doctor. If control of dust and other air contaminants is important, the employment of one is justified. A local engineer has the advantage of being able to check and recheck until complete control is effected.

Control of Exposures. Having located and identified conditions that are capable of causing disease and either estimated or determined their importance, it becomes the doctor's duty to set the machinery of control in motion. How he does this depends upon his place in the organization. It is usually desirable that he consult with the safety engineer, who is often much interested and frequently quite competent in recognizing conditions that are capable of causing disease and advising methods or designing apparatus for their control. Occasionally the safety engineer is completely responsible for the removal of dust and other air contaminants along with accident prevention. At any rate, he is thoroughly familiar with plant conditions and can be a valuable aid to the physician in the furtherance of his program for the prevention of disease.

The measures ordinarily used for control are (a) substitution of harmless materials when possible, or (b) changes in processing and manufacturing, (c) capture of dusts, fumes, mists, vapors and gases at their points of origin, (d) segregation of operations when capture is not feasible, (e) respiratory protection when safe limits of air contamination are necessarily exceeded, and (f) if there be dermal contact, by use of protective creams or suitable gloves, clothing, etc.

Maintenance of Control. As exhaust systems, respirators, helmets and other protective equipment may get out of order, and plant conditions and operating methods may be changed, it is necessary that a plan for the prevention of disease include procedures to assure continued control over exposures. Obviously, the first essential is intelligent use of the protective equipment. The workmen must receive suitable (a) instruction and have (b) watchful supervision. The latter is necessary to continuous effective operation of protective equipment as well as the maintenance of safe practices.

Early in the promotion of a control program it is desirable that the doctor, accompanied by the safety engineer or whoever may be responsible, make frequent (c) periodic plant inspections. Later, when routine is established, the workmen are well informed in safe practices and the supervision is habitually watchful, inspections may be made with less frequency—say monthly.

As materials may be changed and processes modified, it is important that the doctor make (d) studies of all materials purchased and (e) studies of all new processes or modifications of old ones, preferably before installations are made or changes are effected.

Superficially considered, the prevention of

diseases has the appearance of being complicated, and to management, expensive and impractical. The above procedure serves to simplify the problem and enables the doctor to place before management an understandable analysis furnishing means for estimating cost and planning for appropriate control measures.

Many conditions capable of causing disease will be found to be under control, others on the border line, a few needing attention. A practical approach is to effect early control of those most needing attention and from them work down to those on the border line of control.

B. Procedures for Control of Diseases in the Plant

3. The doctor is responsible for the detection of physical impairments and diseases among the workmen and the determination of their significance as actual or possible sources of disability.

a. If they be of occupational origin, the doctor is responsible for treatment. He may, however, delegate treatment to an assistant or to a consultant according to his judgment.

b. If they be of non-occupational origin, the doctor's responsibility is discharged when he has reported his findings to the workman involved.

The above provisions are in conformance with the employer's responsibility as fixed by law and the rights of the physicians who are the employees' medical advisers.

The doctor discharges his duty in detecting physical impairments and diseases through physical examinations of the workmen according to the following schedule:

Preemployment Examinations. These should be sufficiently complete to enable the doctor to advise on the safe placement of new workmen. They will include such technical procedures (roentgenograms of the lungs, urinalyses, blood pressure readings, etc.) as the doctor considers essential to a fair conclusion.

Transfer Examinations. Workmen being transferred from one department to another should receive such examinations as may be necessary to safe placement in the departments to which they are being transferred.

Periodical Examinations. These are to secure early diagnosis of preventable diseases and adjustments in occupation if such be necessary. They should be as complete as the doctor needs to make them, and they should be made as often as required to give the workmen health protection, but not less frequently than annually.

Reentrance Examinations. These should be made after absence for illness or injury. They are to protect workmen against too early return to usual work or to effect changes in occupation if indicated. These need not be more extensive than in the judgment of the physician is required to safeguard the workman and the employer.

Requested Examinations. These are such as any doctor might make for diagnosis and counsel. They should be sufficiently thorough to establish whether a workman is suffering from an occupational or a non-occupational condition.

At any time the doctor's findings may indicate the necessity of separation or transferral. This is always an important decision and the doctor should make sure of his ground, but having reached a conclusion, it should be accepted with due appreciation of his motive and judgment which are assumed to be impartial and wholly medical.

4. The doctor should be consulted frequently. When the doctor is established and has won the confidence of the employees, he will be consulted often for the relief of minor ailments and advice on sickness that may or may not be related to occupation. To maintain the confidence and respect that prompt employees to seek this help, the doctor should conduct his consultation with them as he would if he were in private practice and they were his private patients. This phase of plant practice is regarded by management as a good-will builder and it is valued accordingly. It rounds out the doctor's health maintenance program. It behooves him to foster it.

5. The doctor must not, however, infringe upon the rights of the family physician. He may give temporary treatment for an emergency or to enable a workman to finish a shift. He may treat injury or sickness that results from occupation. All else must be guided into the channels of ordinary medical practice.

It is not necessary for the plant doctor to

irritate the physicians of the community by encroaching upon their fields; if he does so in the belief that he is protecting the interests of the employer or in assuring the employee good service, he is all wrong. He may cooperate with outside doctors. He may do what he can to shorten the waiting period that always precedes consulting a physician. Beyond this he need not go, except insofar as industry is legally responsible.

6. The doctor should keep records of all physical examinations and consultations, reports on injuries and illness and such other information as might be necessary to claims purposes. Management is not particularly interested in the number of treatments a doctor gives daily or the number of bandages he puts on, unless they indicate something out in the plant that needs correction. Management wants a complete medical record of each employee from day of employment up to his separation in order that claims for compensation may be judged fairly. Certainly the doctor needs complete records if he is to advise workmen on the maintenance of their health.

Management naturally has no idea as to the cost or importance of ordinary sickness among workers nor the possible relations, if any, of occupation to ordinary sickness. It would be better if it had because compensation is gradually being extended and may some day cover all sickness. It is therefore suggested that medical records be such that studies can be made of ordinary sickness as well as occupational diseases and injuries. As a matter of fact, such studies are essential to a complete health program.

C. Procedures for Control of Disabilities

7. It goes without saying that management wishes employees to receive good medical service in the treatment of occupational injuries and illness. The control of disabilities begins with the care of disabled workers. The sooner they are returned to work the better it is for them and their employer. So the desideratum in the treatment of occupational injuries and disease is to effect recovery in the shortest possible time consistent with good results.

The plant physician is a professional man. It is presumed that he has had sufficient training and experience to have developed what is called judgment, and he is entitled to use it in the treatment of his patients. Details as to treatment need not therefore be considered. Even so the plant doctor is now less a surgeon than formerly and more a medical adviser. He will do well to support his opinions and decisions by recognized counsel when in doubt and in all important cases. What industry sincerely wants next to avoiding occupational injuries and diseases is competent handling when they occur. It is cheaper and results are better in the long run. So the plant doctor who tries to carry the whole load is rather unwise, regardless of his ability.

This is especially true in the handling of cases that require corrective treatments—physiotherapy, occupational therapy and rehabilitation. It is also true in the handling of the x-ray service in the plant, particularly with respect to the interpretation of chest films.

Efforts to reduce disabilities by corrective methods are very desirable and frequently quite satisfactory if the beneficiaries are given work suitable to their readjusted physical condition. This is an employment procedure and the principles governing safe placement are applicable. In an industrial tuberculosis control program, it ranks in importance with suppression of conditions that favor tuberculosis and case-finding.

Conclusion

A great deal has been said about tuberculosis in industry and frankly industry is suspected of being an important source of the disease. Whether this be true or not, and it is subject to question, industry is an excellent point of attack and is prepared to assist considerably in the general movement against tuberculosis.

As a matter of fact, the health maintenance program of industry, without any special effort directed toward tuberculosis, is effective in preventing that disease as well as the ordinary occupational diseases. That much has already been accomplished as suggested by experiences of the Metropolitan Life Insurance Company in its group of 17,700,000 industrial policy holders. The following is quoted from that company's Statistical Bulletin of January, 1938:

Mortality From Tuberculosis Drops 5.5 Per Cent

"Whatever may be transpiring throughout the general population of the United States, the long-time downward swing in the tuberculosis death rate is still going on among these millions of insured wage-earners and their families. The tuberculosis death rate for 1937 in the general population of the United States is not yet at hand, but provisional reports for 1936 indicate that there was perhaps a slight increase from the death rate in 1935, so that the decline to which we had become accustomed from year to year seemed to be at least temporarily arrested. Among the insured, on the other hand, the mortality from this disease continued to drop in 1936 by 2.7 per cent below the 1935 figure, and the 1937 death rate (51.3 per 100,000) marks a further sizable drop of 5.5 per cent. Over a period of a quarter of a century, the decline in the death rate from tuberculosis has been greater among the industrial policyholders of the Metropolitan Life Insurance Company than in the general population of the country, and this holds true for both males and females, and for Negroes as well as for white persons. This means, in essence, that the very element of the population where the tuberculosis situation was formerly the most serious has benefitted most from the movement against tuberculosis."

So industry has moved along with the general anti-tuberculosis campaign and industry can be counted on to carry on.

Modern Concepts of Artificial Pneumothorax in Pulmonary Tuberculosis*

M. J. FINE, M.D.**
Newark, New Jersey

COLLAPSING the lung in the treatment of tuberculosis was advised long before "collapse therapy" was used in the form of artificial pneumothorax. Over a century ago, James Carson wrote: "It has long been my opinion that if ever this disease (tuberculosis) is to be cured, and it is an event of which I am by no means disposed in all cases to despair, it must be accomplished by mechanical means, or, in other words, by surgical operation." He further stated: "The lung would by those means be reduced to a state of quiet collapse and the elastic fibres separated by ulcer would be brought in contact. The lung would, in consequence of the absorption of air contained between the two pleura, be again dilated to contiguity with the outer wall surface of the chest, and if the other lung were diseased, it might then be treated as the former had." In 1832, James Houghton reported marked improvement following a spontaneous pneumothorax in cases of advanced tuberculosis.

Treatment by introducing air into the pleural cavity was originally reported by Potaine, who in 1884 treated hydrothorax by aspiration of fluid and injection of air. In 1882, Folanini treated tuberculosis of the lungs with pneumothorax. The first bilateral collapse therapy was performed in 1912 by Ascoli. Although perhaps used earlier, not until 1916 did the value of collapsing the lungs in tuberculosis obtain recognition in this country. The writer was among the first in the United States to advocate pneumothorax therapy in early tuberculosis and also suggested partial or selective collapse.

Brauer has stated that collapse of the lung has two essential functions: (1) Mechanical and (2) Physiologic. Under *mechanical*, may be included augmentation of the existing tendency for lung shrinkage, the approximation of cavity walls and prevention of extension along lymphatic and bronchial channels. *Physiologic* action includes ische-

* Read before the Medical Staff of the Newark City Hospital, May 5, 1938.

** Director, Tuberculosis Division, Newark, N. J., Department of Health.

mia of the lung with concomitant passive hyperemia or diminished lymph circulation—resulting in limitation and demarcation of the pathologic lung tissue with proliferation of connective tissue.

The general value of this form of treatment has been so widely recognized that its use in sanatoria has expanded in the United States from 2 per cent in 1917 to almost 80 per cent today. Throughout Europe, collapse therapy is more advanced and more widely used. Because of economic conditions, a patient is sent to the hospital for an initial pneumothorax and then to local refill clinics for subsequent treatment. He is usually permitted to continue his regular occupation.

The modern sanatorium is an institution where the patient is taught to take care of himself and to prevent infection to others. This should take but a short time. It serves, too, as a detention camp for careless patients, and for those whose sputa continue positive in spite of collapse therapy.

We no longer think that every case of tuberculosis requires sanatorium care. The tendency now is to use hospitals where surgical treatment can be given. Collapse therapy is a surgical procedure that can be administered in general, as well as special hospitals. Hudson County (N. J.) has recently completed a 500 bed hospital in its Medical Centre at Jersey City for the treatment of tuberculosis and Bellevue Hospital (New York City), has added 350 beds to this service. It is well-recognized that after successful collapse has been established, the patient can be rendered non-infectious to his family because the sputum has become negative and the source of expectoration has been diminished.

In Newark, New Jersey, at both the Health Department and the City Hospital, we advocate pneumothorax in every case as soon as active pulmonary disease is diagnosed—disregarding the extent of the lung infection. Little contraindication to pneumothorax exists in the average case.

In the past five years at the Health Department Clinic we did:

Refills	3310
No. patients	269
No. Initial-City Hospital	114

Pneumothorax is most effective between the ages of 10 and 45. After the age of 45, the pleura are less retentive of air and chances for a spontaneous pneumothorax with subcutaneous emphysema are greater. My youngest patient was one year old, my oldest 70 years of age. Pneumothorax can be given when only 10 per cent of the lung is normal, without producing a feeling of great discomfort. The only way to determine whether or not pneumothorax can be given, is to try it. Adhesions cannot be definitely recognized by physical or x-ray examination. The appearance of fluid during the pneumothorax is a more or less natural sequence. This fluid is usually absorbed readily and seldom becomes purulent, though in the pressure of tuberculous infection of the pleura, tuberculous empyema frequently follows.

Pneumothorax should be continued at least a year. Beyond that, its continuance depends on the patient's condition, involvement and response. My practice is, after a year, to permit the lung to expand gradually. When about a tenth of the lung is collapsed and I see that the cavity is closed and does not open, and the sputum negative, I then discontinue pneumothorax.

The patient enjoys a better chance of being able to carry on at his job when his lung is collapsed. My experience is that after the patient has had a successful collapse and the cavity has been closed (usually three or four weeks after initial collapse) he is then safely able to continue his occupation.

Tuberculous patients should not become pregnant while receiving treatment. Pregnancy, if it does occur, should be interrupted as soon as it is recognized, if before the fourth month. After the fourth month, the pregnancy should be permitted to go on to termination. If after delivery, the patient becomes worse, pneumoperitoneum should be instituted.

Although Ascoli gave bilateral pneumothorax in 1912, bilateral involvement was considered a contra-indication to pneumothorax until a few years ago. At present, from 10 to 15 per cent of all patients under pneumothorax treatment are receiving it bilaterally. In our Health Department Pneumothorax Clinic, twelve patients are now receiv-

ing bilateral pneumothorax. In my private practice almost 50 per cent of my cases receive bilateral pneumothorax.

Pneumothorax seems certain to remain a valuable aid in the treatment of tuberculosis and it is here to stay until something more effective can be found.

65 Gerard Place.

Organization News

Report of the Committee for the Advancement of Scientific Programs on Diseases of the Chest

IN ENDEAVORING to formulate a report of the Committee for the Advancement of Scientific Programs on Diseases of the Chest, it is strikingly apparent that the work of this committee and the one for the Advancement of Tuberculosis Organization in Medicine is so closely interlocked that it has been found practically an impossibility to segregate, as it were, the wheat from the chaff. In considering the cause for this situation, I feel it is due to the fact that each state has a Governor who heads the work on both the Organization program and the presentation of Scientific Papers—so that in reporting the activities and progress of their respective States, the Governors, almost without exception, have given a combined report and in such a manner that, as I have stated, it has been practically impossible to segregate the activities of these two committees.

It may appear that this committee has gotten away to a slow start. However, this is only apparent, and not real, because the activities of this committee depend upon and follow the action of the Organization Committee. After the Organization Committee has completed its work, which is over 50 per cent finished, the Scientific Program Committee will continue to follow up and remain a most important, permanent committee, whereas the Organization Committee will disband after the organization work is completed.

The work of the Governors should continue as heretofore; that their activities should be reported to the Committee Member to whom their territory has been assigned; that the Committee members, in turn, should render their reports to the Chairman. The Chairman will then send copies of the reports received from his committee members to the President of the College, the Chairman of the Board of Regents and the Executive Secretary of the College for their files.

Now, referring to the brief report which I have been able to compile on the activities of this Committee, exclusive of the Organization Committee.

Dr. H. G. Trimble of California reports that the work on Scientific Programs is rather well covered by the California Tuberculosis Association, acting as the Tuberculosis Committee for the State Medical Society. Since Dr. Trimble's report we have received word that through the efforts of Dr. Wm. C. Voorsanger this has been changed and that the Council of the California State Medical Society has now appointed a Committee on Tuberculosis, which is carrying on this work. A series of clinics and talks in connection with the local medical society are arranged in each county every year, outside of the larger centers, where the local tuberculosis association carries on this work.

Dr. James S. Edlin of New York reported in January the formation of a clinical society at the Municipal Sanatorium in Otisville, N. Y., at which papers on tuberculosis were to be presented. Dr. Edlin, himself, has submitted papers for publication in *Diseases of the Chest.*

From Michigan, a report was received from Dr. John Alexander that a considerable number of papers are given each year before city, county and state medical societies. The Trudeau Society meets twice a year, with meetings well attended. The Department of Postgraduate Education of the University and of Wayne University carry on an itinerant postgraduate course each year as part of the program being specifically devoted to thoracic diseases.

Dr. Wm. D. Tewksbury of Washington, D. C. has requested all Governors in the States assigned to him to cooperate in getting scientific papers on diseases of the chest on the local medical society programs. He reported a Round Table discussion on chronic bronchitis and bronchiectasis in January before the District of Columbia Medical Society, over which he presided as Chairman. Dr. E. R. Fenton, a Fellow of the College, presented one of the papers.

The Governor of Montana, Dr. Frank I. Terrill, has given talks before practically every medical society in the State. He reports that the Stat

Sanatorium staff renders free service to physicians of the state through interpretation of questionable x-rays.

Dr. Marr Bisaillon, Governor of Oregon, reports that last December an exhibit on tuberculosis and its control was given under the auspices of the Tuberculosis Committee of the State Medical Society. The agencies participating were the County Medical Society, the City Board of Health, the Oregon Tuberculosis Association, the Multnomah County Health Unit and the Visiting Nurse Association.

From my own State of Ohio, I am happy to report a generalized discussion of Tuberculosis therapy before the Muncie, Indiana Medical Society; the presentation of Planography (Body Section Radiography) before staffs of the Good Samaritan Hospital and Miami Valley Hospital in Dayton; opening the discussion and showing of films before the Radiological Society of America in Pittsburgh, Pennsylvania, on December first.

The reports received from other states, I believe, are incorporated in Dr. Matson's report and I feel that it would be only a repetition to enumerate them here.

All in all, I feel that the members of this Committee have accomplished splendid results in holding clinics and furthering the presentation of scientific papers on diseases of the chest.

W. C. BREIDENBACH, M.D.,
Dayton, Ohio,
Vice-Chairman,
Committee for the Advancement of Scientific Programs on Diseases of the Chest.

CORRECTION

In the April issue on pages 122 and 124 a report was incorrectly made of Oregon's new hospital. The name of the hospital is the University State Tuberculosis Hospital and Dr. Ralph Matson is the Chief Surgeon and Chief Medical Consultant, not the Medical Director. Dr. Matson's First Assistant, who is also Assistant Medical Director, is Dr. John W. Stacey of Yuma, Arizona, a Fellow of the College; the Second Assistant and Resident Physician is Dr. James S. Conant, a Fellow of the College; and the Assistant Resident Physician is Dr. Florence A. Brown, formerly of Auberry, California.

FELLOWS SPEAK BEFORE MEETING OF ILLINOIS TUBERCULOSIS ASSOCIATION

At the Annual Meeting of the Illinois Tuberculosis Association, held at La Salle, April 15-16, 1940, Dr. Robinson Bosworth, East St. Louis, Fellow of the College, spoke on *Present Sanatorium Laws—Their Advantages and Disadvantages;* Dr. W. J. Bryan, Rockford, Fellow of the College, spoke on *Problems Facing Sanatorium Boards;* and Dr. Bernard Klein, Joliet, Fellow of the College, spoke on *Pneumothorax Evaluations.* Dr. Fred M. Meixner, Peoria, Regent of the College for District Number 6, Presided over the Section on Diagnostic and Treatment Methods and was elected vice-president of the Illinois Tuberculosis Association.

GOVERNOR DELIVERS TALKS

Dr. U. E. Zambarano, Governor of the College for Rhode Island, addressed the Rhode Island Tuberculosis Association on *Trends in Tuberculosis Work* on April 11, 1940. Dr. Zambarano will address the Nurses of the Rhode Island Health Department on May 3, 1940 and the subject of his talk will be *The Treatment of Tuberculosis.*

FELLOWS ON PROGRAM OF TEXAS TUBERCULOSIS ASSOCIATION MEETING

At the Thirty-first Annual Meeting of the Texas Tuberculosis Association held on April 11-13, 1940, at the Nueces Hotel, Corpus Christi, the Pioneers of the Texas Tuberculosis Association were presented. These included the following Fellows of the College: Dr. W. M. Brumby, Houston, who organized the Association in 1908; Dr. R. B. Homan, Sr., El Paso, who has served as a member of the Board of Directors, and in other capacities, for over 22 years; and Dr. J. B. McKnight, Sanatorium, who has been on the Board of Directors since 1918.

In the Medical Sections, Dr. Donato G. Alarcon, Fellow of the College from Mexico City, spoke on *Results and Further Possibilities of New Treatment of Pulmonary Tuberculosis.* Also present as speakers, were Dr. Orville E. Egbert, El Paso, Governor of the College for Texas, *Problems in Tuberculosis of Long Standing;* Dr. H. F. Carman, Dallas, Regent of the College for Texas, *Reemployment of Ex-patients;* Dr. R. G. McCorkle, San Antonio, Fellow of the College, *Management of Pulmonary Tuberculosis in Relation to Hemorrhage;* Dr. Sim Hulsey, Ft. Worth, Fellow of the College, *Management of Pulmonary Tuberculosis in Relation to Allergic Diseases;* and Dr. W. C. Farmer, San Antonio, Fellow of the College, X-Ray Conference.

PRESIDENT GIVES ADDRESSES

On April 3, 1940, Dr. Ralph Matson, Portland, Oregon, President of the American College of Chest Physicians, spoke before the Oregon State Tuberculosis Association on *Modern Trends in the Surgical Treatment of Pulmonary Tuberculosis.* On April 5, 1940, Dr. Matson also gave a Surgical Clinic for the Pacific Coast Surgical Society at the University State Tuberculosis Hospital.

YOUR HEADQUARTERS

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Entertainment Committee
James S. Edlin, M.D., Chairman,
New York, N. Y.

General Arrangements Committee
Edgar Mayer, M.D., Chairman,
New York, N. Y.

Saturday, June 8, 1940

9:00 A. M.—MEDICAL SECTION

Dr. Foster Murray, Brooklyn, N. Y., Chairman.

"Chronic Pulmonary Diseases from the Insurance Point of View"
Dr. Walter C. Hausheer
Newark, New Jersey
Discussion to be opened by
Dr. Harry Wessler, New York, New York.

"The Indications of Voluntarily Discontinuing Pneumothorax Treatment"
Dr. John N. Hayes
Saranac Lake, N. Y.
Discussion to be opened by
Dr. Paul H. Ringer, Asheville, North Carolina.

"Case Finding—A Fundamental in Tuberculosis Control"
Dr. Herbert R. Edwards
New York, N. Y.
Discussion to be opened by
Dr. Frank Walton Burge, Philadelphia, Penn.

"Extrapleural Pneumothorax: A Report of Experiences and Present Day Indications"
Dr. Richard H. Overholt
Boston, Massachusetts
Discussion to be opened by
Dr. Paul Geary, Plainfield, New Jersey.

12:00 P. M.—"INFORMATION PLEASE" LUNCHEON

The men listed here are the experts who will sit at the head table and answer questions. Please address your inquiries to Dr. Edward P. Eglee, Chairman, 105 East 53rd Street, New York, N. Y.

Medicine
Dr. James Alexander Miller
New York, New York
Surgery
Dr. Ralph C. Matson
Portland, Oregon
Bacteriology
Dr. S. A. Petroff
Staten Island, New York
Physiology
Dr. Dennison Richards
New York, New York
Bronchoscopy
Dr. John D. Kernan
New York, New York
X-Ray
Dr. Maurice McPhedran
Philadelphia, Pennsylvania
Pathology
Dr. Henry C. Sweany
Chicago, Illinois

2:00 P. M.—MEDICAL SECTION

"The Correlation Between Tomographic Studies of the Lung and the Necropsy Findings; Both Studies Done Shortly After Death"
Dr. Israel G. Epstein
Dr. Myron Herman
Dr. Henry Green
Brooklyn, N. Y.
Discussion to be opened by
Dr. Abraham V. Shapiro, New York, New York.

"Newer Aspects of the Pneumoperitoneum Treatment of Pulmonary Tuberculosis"
Dr. Andrew L. Banyai
Wauwatosa, Wisconsin
Discussion to be opened by
Dr. Burgess Gordon, Philadelphia, Penn.

"Diagnosis of Bronchopleural Fistula in Tuberculous Empyema"
Dr. D. Matsuzawa
Staten Island, New York
Discussion to be opened by
Dr. H. McLeod Riggins, New York, New York.

"Bronchoscopy in Bronchial Obstruction"
Dr. Louis H. Clerf
Philadelphia, Pennsylvania
Discussion to be opened by
Dr. Mervin Meyerson, New York, New York.

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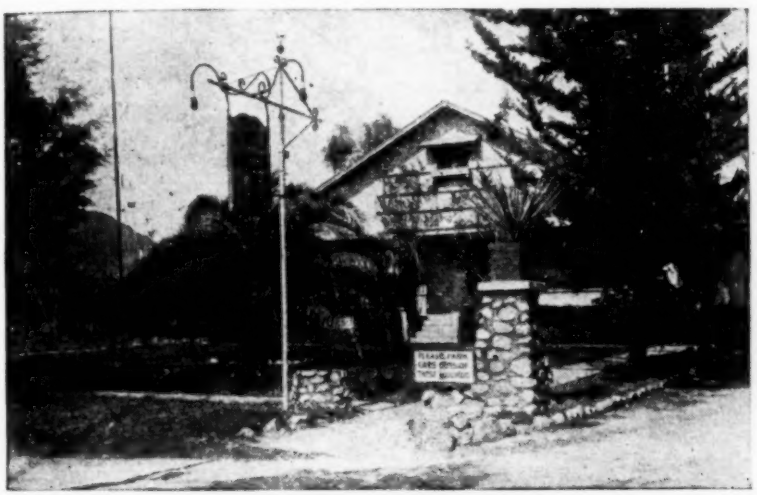

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C. E. ATKINSON, M.D.
MEDICAL DIRECTOR

A modern and thoroughly-equipped institution for the treatment of all forms of tuberculosis. Beautiful accommodations for patients, including private suites with glass-enclosed sun parlors.

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EL PASO, TEXAS

CHAS. M. HENDRICKS & JAS. W. LAWS, Medical Directors

7:00 P. M.—DINNER METING OF THE BOARD OF REGENTS AND THE HOUSE OF GOVERNORS

Sunday, June 9, 1940

9:30 A. M.—ADMINISTRATIVE SESSION

Presidential Address

Dr. Ralph C. Matson
Portland, Oregon

Reports of Committees

Committee for the Advancement of Undergraduate Teaching in Medical Schools
Dr. Edward W. Hayes
Monrovia, California

Committee for the Advancement of Tuberculosis Organization in Medicine
Dr. Benjamin Goldberg
Chicago, Illinois

Sanatorium Committee
Dr. Harry Warren
San Francisco, California

Committee for the Advancement of Scientific Programs in Organized Medicine
Dr. Champ H. Holmes
Atlanta, Georgia

Statistical Committee
Dr. J. Winthrop Peabody
Washington, D. C.

Membership Committee
Dr. Arnold Minnig
Denver,Colorado

Committee on Nominations
Dr. John H. Peck
Oakdale, Iowa

Report of the Secretary-Treasurer

Dr. Robert B. Homan, Jr.
El Paso, Texas

Election of Officers

Address of Incoming President

Dr. John H. Peck
Oakdale, Iowa

12:00 P. M.—"INFORMATION PLEASE" LUNCHEON

The men listed here are the experts who will sit at the head table and answer questions. Please address your inquiries to Dr. Edward P. Eglee, Chairman, 105 East 53rd Street, New York, N. Y.

Medicine

Dr. Carl R. Howson
Los Angeles, California

Surgery

Dr. Richard Overholt
Boston, Massachusetts

Bacteriology

Dr. S. A. Petroff
Staten Island, New York

Physiology

Dr. Andre Cournand
New York, New York

Bronchoscopy

Dr. Mervin C. Myerson
Brooklyn, New York

X-Ray

Dr. H. L. Sampson
Saranac Lake, New York

Pathology

Dr. Henry C. Sweany
Chicago, Illinois

2:00 P. M.—SURGICAL SECTION

Dr. David Ulmar, Chairman
New York, N. Y.

"Surgical Management of Carcinoma of the Lung"
Dr. William F. Reinhoff, Jr.
Baltimore, Maryland

"Certain Aspects of Intrapulmonary Cavitation"
Dr. Harold Brunn
Dr. Sidney Shipman
San Francisco, California

"Surgical Treatment of Acute Pulmonary Abscess"
Dr. Harold Neuhof
New York, N. Y.

"Surgical Treatment of Mixed Infection, Tuberculous Empyema"
Dr. Louis R. Davidson
New York, N. Y.

All discussions will come from the floor.

7:00 P. M.—COCKTAILS
8:00 P. M.—BANQUET AND INSTALLATION OF OFFICERS

Monday, June 10, 1940

SYMPOSIUM ON TUBERCULOSIS

To be presented in the Section on Practice of Medicine in the General Assembly of the Meeting of the American Medical Association.

"Epidemiology"
Dr. Jay Arthur Myers
Minneapolis, Minnesota
Discussion to be opened by
Dr. H. S. Diehl, Minneapolis, Minnesota.

"Diagnosis"
Dr. Hugh M. Kinghorn
Saranac Lake, New York
Discussion to be opened by
Dr. Louis Hamman, Baltimore, Maryland.

"Treatment"
Dr. Ralph C. Matson
Portland, Oregon
Discussion to be opened by
Dr. Alexius Foerster, Colorado Springs, Colo.

LEAHY EMPYEMA TUBE FOR OPEN DRAINAGE

P16935A—This tube, designed by L. J. Leahy, Buffalo, N. Y., embodies several features which make it extremely useful in cases where it is desired to have continuous open drainage with secondary irrigations. The flanges are sufficiently flexible so that they fold smoothly and can be introduced through a small opening. The gussets on each side permit it to be withdrawn without difficulty. The tube is self-retaining as the flanges are just in contact with the pleura and a safety pin is put through the tube at the skin edge, the wound being closed about the tube. There is no necessity for sutures through the tube or adhesive tape to hold it in place. As the inside portion of the tube is flush with the chest wall it does not interfere with complete re-expansion of the lung and there is no tendency towards pressure necrosis. With the outlet in the pleural cavity directly in contact with the chest wall drainage is likely to be more adequate. The tube can be re-used many times.

See "Journal A. M. A." March 9, 1940.
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TUBERCULOSIS KILLS 5000 PERSONS EACH YEAR IN PENNSYLANIA

Yet adequate treatment will control almost every EARLY involvement in this disease.

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JOHN S. PACKARD, M.D.
ELMER R. HODIL, M.D.
Associate Physicians

WILLIAM DEVITT, M.D.
Physician-in-Charge
WILLIAM DEVITT, JR.
Superintendent

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80 miles from New York City; 32 miles from Philadelphia; 3 miles from Camp Dix—Ideally located for patients with respiratory diseases.

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Equipped with X-ray and Fluroscope; Pneumothorax.
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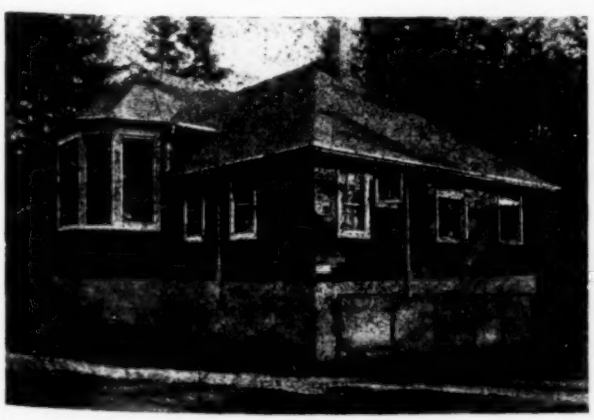

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A thoroughly equipped institution for the modern medical and surgical treatment of tuberculosis. An especially constructed unit for thoracic surgery. The most recent advances in pneumolysis applied to those cases demanding this branch of intrathoracic surgery.

MODERATE RATES

Descriptive Booklet on Request

MEDICAL DIRECTORS

Ralph C. Matson, M.D., & Marr Bisaillon, M.D.
1004 Stevens Building Portland, Oregon

9:00 A. M.—MORNING CLINIC SESSIONS

Lenox Hospital — 9:00 A.M. to 11:00 A.M.

Medico-Surgical Clinic:
Dr. Carl Eggers
Dr. John C. Gerster
Dr. Otto C. Pickhardt
Dr. H. McLeod Riggins
Dr. Dewitt Stetten
Dr. Grant Thorburn

Kings County Hospital — 9:00 A.M. to 11:00 A.M.

1. "Primary Infection Tuberculosis"
   Dr. Frederick Bridge
2. "Early Manifestations of Pulmonary Tuberculosis"
   Dr. Milton Louria
3. "Bilateral Pneumothorax Therapy"
   Dr. Harry Reibstein
4. Clinical Case Reports:
   A. "Early Diagnosis of Pulmonary Neoplasms"
   Dr. Ralph Romano
   B. "A Case of Blastomycosis"
   Dr. Jacob Rogoff
   C. "A Case of Pulmonary Tuberculosis Complicated by Hyperthyroidism"
   Dr. William Wagman
   D. "Unusual Lung Abscesses"
   Dr. Peter Amazon
   E. "Becks Sarcoid and Miliary Tuberculosis"
   Dr. Ida Levine
   F. "Pulmonary Neoplasms Associated with Pulmonary Tuberculosis"
   Dr. Abraham Bolker
   G. "Pneumothorax Therapy Followed by Acute Miliary Spread"
   Dr. Vincent Lacavara
   H. "A Case of Hypertension Followed by Addison's Disease"
   Dr. Sol Brandwein

Montefiore Hospital — 11:00 A.M. to 1:00 P.M.

"Diagnostic Significance of Sputum Findings"
Dr. Pinner—20 minutes

"Demonstration of Respiratory Tests and Bronchospirometry"
Drs. Leiner, Weiss, and Zavod—30 minutes

"Pulmonary Abscess"
Dr. Rosenblatt—20 minutes

"Presentation of Surgical Problems"
Dr. Aufses—15 minutes

"Bronchial Tuberculosis"
Dr. Cohen—15 minutes

"Hematogenous Tuberculosis"
Dr. Rubin—15 minutes

1:00 P. M.—LUNCHEON OF THE SANATORIUM COMMITTEE

Dr. Harry C. Warren, Chairman,
San Francisco, California

2:30 P. M.—AFTERNOON CLINIC SESSIONS

Sea View Hospital — 2:30 P.M. to 4:30 P.M.

"Indications and Results of Cannulation of Giant Tuberculous Pulmonary Cavities"

"Demonstration of the Surgical Procedure"
Drs. Louis R. Davidson and George G. Ornstein

Bellevue Hospital — 2:30 P.M. to 4:30 P.M.

"Clinical Problems in Thoracic Disease"
Drs. Andrain Lambert, J. Burns Amberson, Jr., and Frank Berry

Kingston Avenue Hospital — 2:30 P.M. to 4:30 P.M.

"Tuberculosis Clinic—Evaluation of Diagnosis and Service to Patients from Time of Admission and During Their Stay at the Hospital"
Dr. Foster Murray

Organization News

FELLOWS ADDRESS LOUISIANA STATE MEDICAL SOCIETY

At the Sixty-first Annual Meeting of the Louisiana State Medical Society, held at the Roosevelt Hotel, New Orleans, Louisiana, April 22-24, 1940, the following Fellows of the College, spoke on the stated topics:

Dr. Julius Lane Wilson, New Orleans, Regent of the College for District Number 8: *Coordination of Anti-tuberculosis Activities.*

Dr. Richard W. Young, Baton Rouge, Fellow of the College: *Early Collapse in Pulmonary Tuberculosis.*

Dr. Peachy R. Gilmer, Shreveport, Fellow of the College, *Surgery in the Treatment of Tuberculosis,* which paper was discussed by Dr. R. H. Frost of Monroe, another Fellow of the College.

Dr. Louis A. Monte, New Orleans, Governor of the College for Louisiana, Presided over the Section on Medicine and Allied Branches and discussed Dr. Young's paper.

TUBERCULOSIS CONGRESS

From October 13 to October 17, the Fifth Pan-American Congress on Tuberculosis will be held in Buenos Aires and Cordoba, Argentina. Dr. Gumersindo Sayago of Cordoba will act as president and the official discussion subjects will be: evidences of tuberculization of the South American countries, heredity and contagion in tuberculosis and the pulmonary aspects of the extrathoracic forms of the disease.